Amendments to the Claims:

1. (Cancelled)

2. (Currently Amended) [[An]] The image sensor as claimed in ~~claim 1~~ claim 11, wherein each pixel further comprises a pixel storage capacitor [[(14)]] connected to the light sensor element [[(12)]] and wherein the voltage gain between the pixel storage capacitor and the sampling capacitor is greater than one.

3. (Currently Amended) An image sensor ~~as claimed in claim 2, wherein~~ comprising a plurality of pixels, each pixel comprising:

a light sensor element, a sensor voltage across the element varying depending on the light incident on the element;

a voltage amplifier having gain greater than 1;

a pixel storage capacitor connected to the light sensor element; and

a sampling capacitor charged by the voltage amplifier, the capacitance of the sampling capacitor [[(18) is]] being less than 10 times the capacitance of at least one of the pixel storage capacitor [[(14)]] and a self-capacitance of the light sensitive element.

4. (Currently Amended) [[An]] The image sensor as claimed in claim 3, wherein the capacitance of the sampling capacitor [[(18)]] is less than 2 times the capacitance of the pixel storage capacitor [[(14)]].

5. (Currently Amended) [[An]] The image sensor as claimed in claim 4, wherein the capacitance of the sampling capacitor [[(18)]] is approximately equal to the capacitance of the pixel storage capacitor [[(14)]].

6. (Currently Amended) An image sensor ~~comprising a plurality of pixels, each pixel comprising: a light sensor element (12), a sensor voltage across the element varying depending on light incident on the element (12); a pixel storage capacitor (14) connected to the light sensor element (12); a voltage amplifier (16) having a gain greater than 1; and a sampling capacitor (18) charged by the voltage amplifier, wherein a voltage gain between the pixel storage capacitor and the sampling capacitor is greater than one, wherein the capacitance of the sampling capacitor (18) is less than 10 times the capacitance of the pixel storage capacitor (14), and~~ as claimed in claim 3, wherein the capacitance of the sampling capacitor [[(18)]] is in the range 0.5 pF to 3 pF, and the capacitance of the pixel storage capacitor [[(14)]] is in the range 0.5 pF to 3 pF.

7. (Currently Amended) An image sensor ~~as claimed in claim 1, wherein~~ comprising a plurality of pixels, each pixel comprising:

a light sensor element, a sensor voltage across the element varying depending on the light incident on the element;

a voltage amplifier having gain greater than 1; and

[[the]] a sampling capacitor charged by the voltage amplifier, a capacitance of the sampling capacitor [[(18) is]] being less than 10 times a self-capacitance of the light sensor element [[(12)]].

8. (Currently Amended) [[An]] The image sensor as claimed in claim 7, wherein the capacitance of the sampling capacitor [[(18)]] is less than 2 times the self-capacitance of the light sensor element [[(12)]].

9. (Currently Amended) [[An]] The image sensor as claimed in claim 7, wherein the capacitance of the sampling capacitor [[(18)]] is in the range 0.5 pF to 3 pF, and the self-capacitance of light sensor [[(12)]] is in the range 0.5 pF to 3 pF.

10. (Currently Amended) [[An]] The image sensor as claimed in ~~claim 1~~ claim 11, wherein the gain of the voltage amplifier [[(16)]] is in the range 2 to 5.

11. (Currently Amended) An image sensor ~~as claimed in a claim 1, wherein~~ comprising a plurality of pixels, each pixel comprising:

a light sensor element, a sensor voltage across the element varying depending on the light incident on the element;

a voltage amplifier having gain greater than 1; the voltage amplifier [[(16)]] ~~comprises~~ including:

first [[(38)]] and second [[(40)]] transistors in series between power lines [(15)]], the light sensor element [[(12)]] being connected to the gate of one of the transistors [[(40)]], and a bias voltage [[(44)]] being connected to the gate of the other transistor [[(38)]], [[the]] an output of the voltage amplifier [[(16)]] being defined at the connection between the first and second transistors [[(38, 40)]] and

a sampling capacitor charged by the voltage amplifier.

12. (Currently Amended) [[An]] The image sensor as claimed in claim 11, wherein the output of the voltage amplifier [[(16)]] is connected to one terminal of the sampling capacitor [[(18)]], ~~the other~~ another terminal of the sampling capacitor [[(18)]] being connected to [[the]] a pixel output through an output switch [[(22; 34)]].

13. (Currently Amended) [[An]] The image sensor as claimed in ~~claim 1~~ claim 11, wherein each pixel further comprises an input switch [[(20; 30)]] for applying a fixed potential (Vreset) across the light sensor element.

14. (Cancelled)

15. (Currently Amended) A method ~~as claimed in claim 14, wherein a reset operation is carried out~~ of measuring light intensity of an image to be detected using a plurality of light sensor elements each forming a pixel of an image sensor, a sensor voltage (Vin) across the sensor elements varying depending on the light incident on the sensor elements, the method comprising:

amplifying the sensor voltage (Vin) using an in-pixel voltage amplifier having a gain greater than 1;

charging a sampling capacitor with the amplified voltage (Vout);

measuring a flow of charge required to charge the sampling capacitor; and

before amplifying the sensor voltage (Vin), ~~the reset operation comprising~~ applying a known potential to one terminal of the sampling capacitor [[(18)]] and applying a known potential (Vreset) across the sensor element to reset the sampling capacitor, the amplified voltage (Vout) being subsequently applied to the other terminal of the sampling capacitor [[(18)]].

16. (Currently Amended) [[A]] The method as claimed in ~~claim 14~~ claim 15, wherein the voltage gain between a pixel storage capacitor and the sampling capacitor is greater than one.

17. (Currently Amended) A method ~~as claimed in claim 16, wherein~~ of measuring light intensity of an image to be detected using a plurality of light sensor elements each forming a pixel of an image sensor, a sensor voltage (Vin) across the sensor elements varying depending on the light incident on the elements, the method comprising:

amplifying the sensor voltage (Vin) using an in-pixel voltage amplifier having a gain greater than 1;

charging a sampling capacitor with the amplified voltage (Vout), the capacitance of the sampling capacitor [[(18) is]] being less than 2 times the capacitance of the pixel storage capacitor [[(14)]]; and

measuring a flow of charge required to charge the sampling capacitor.

18. (Currently Amended) [[A]] The method as claimed in claim 17, wherein the capacitance of the sampling capacitor [[(18)]] is approximately equal to the capacitance of the pixel storage capacitor [[(14)]].

19. (Currently Amended) [[A]] The method as claimed in ~~claim 14~~ claim 15, wherein the gain of the voltage amplifier [[(16)]] is in the range 2 to 5.

20. (Currently Amended) [[An]] The image sensor as claimed in claim 11, wherein the second [[(40)]] transistor has a non-unity voltage amplification.

21. (New) The image sensor as claimed in claim 3, wherein a voltage gain between the pixel storage capacitor and the sampling capacitor is greater than one.

22. (New) The image sensor as claimed in claim 11, wherein a capacitance of the sampling capacitor is in the range of 0.5 pF to 3 pF.